

August 2021: Factors, Global Stocks and TIPS in Favour

- The S&P 500 and NASDAQ Composite Index both reached all-time highs, boosted by strong earnings
- With \$73 billion of inflow in August, the U.S. ETF market size is one step closer to \$7 trillion
- All factors posted gains and investors found opportunities in a variety of factor ETF categories
- The Fed's tapering signal had little impact on the fixed income ETF market; all categories had inflows

Summary: In a year of marvels, U.S. equities had a remarkable month. The S&P 500 posted a 3% gain, bringing year-to-date return above 20%. Mid- and small-caps also finished August with gains; the S&P MidCap 400 and S&P SmallCap 600 indices each rose by 2%. Global equities including emerging markets posted similarly impressive returns. On the fixed income side, the Fed recently signaled the possibility tapering by year-end, the market either doesn't believe it or has already baked such expectations into its behaviour; fixed income ETF flows remain steady with nary a reaction. As of the writing of this report, the U.S. 10-year treasury was flat at 1.29% after the release of disappointing jobs data, suggesting that the tapering program might be unlikely to kick off in September. Commodity ETFs suffered an outflow of \$2.0 billion, primarily attributed to redemptions from SPDR Gold Shares (GLD).

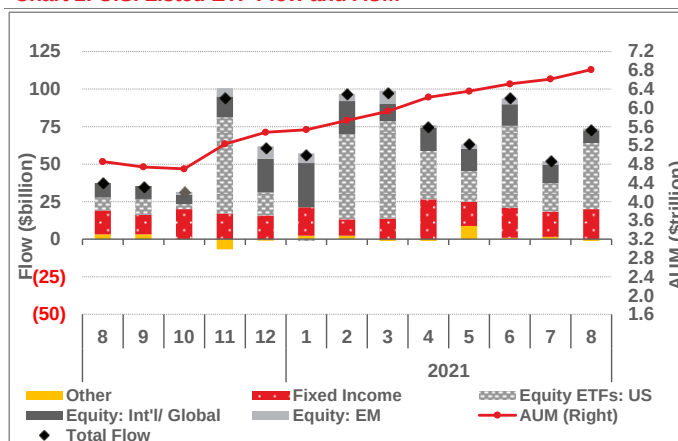
Equity ETFs by Geography: A large portion of equity ETFs' inflows went into U.S.-focused ETFs. In the monthly single long ETF inflow table, the top four products are broad market U.S. equity ETFs (VOO, VTI, SPY, QQQ), and these alone contributed \$21.2 billion to the total \$23.9 billion inflow to the U.S. Broad/Large-cap category. China-focused equity ETFs overall took in \$1.4 billion, or 5.2% of their starting AUM, but the flows were also concentrated in only a few products. While investors withdrew from mainland A-shares market (e.g., \$0.2 billion out of Xtrackers Harvest CSI 300 China A-Shares ETF, ASHR), KraneShares CSI China internet ETF (KWEB) gained \$1.5 billion, or 28.6% of its starting assets. The Chinese government started to increasingly regulate the country's dominant tech industry and stock prices reacted by declining as far as 70% below the February peaks. This might have prompted some contrarian investors to pour assets into ETFs like KWEB to bottom-fish attractive entry points. More recently, the Chinese government's new rules against unfair competition and improved data privacy may have removed some lingering uncertainty, which together with strong earnings, helped restore investor confidence in Chinese tech stocks.

Table 1: ETF Flows by Category

	AUM (\$B)	Mkt Shr	August 2021 Flow (\$B)	Flow/AUM	Jan-Aug 2021 Flow (\$B)	Flow/AUM
Equity	\$5,326		\$53.8	1.0%	\$465.1	11.2%
U.S. Broad/Large-Cap	\$1,651	24%	\$23.9	1.5%	\$109.0	8.6%
U.S. Other	\$2,375	35%	\$20.2	0.9%	\$195.2	10.7%
Int'l / Global	\$981	14%	\$8.4	0.9%	\$128.6	16.5%
Emerging Markets	\$319	5%	\$1.3	0.4%	\$32.4	11.6%
Fixed Income	\$1,228	18%	\$20.0	1.7%	\$143.0	13.1%
Commodity	\$139	2%	-\$2.0	-1.4%	-\$3.5	-2.4%
Multi-Asset	\$46	1%	\$2.2	5.0%	\$13.8	44.9%
Levered Long	\$63	1%	-\$2.3	-3.8%	-\$2.3	-5.2%
Inverse	\$12	0%	\$0.9	7.7%	\$5.0	44.9%
Total	\$6,814	100%	\$72.6	1.1%	\$620.9	11.3%

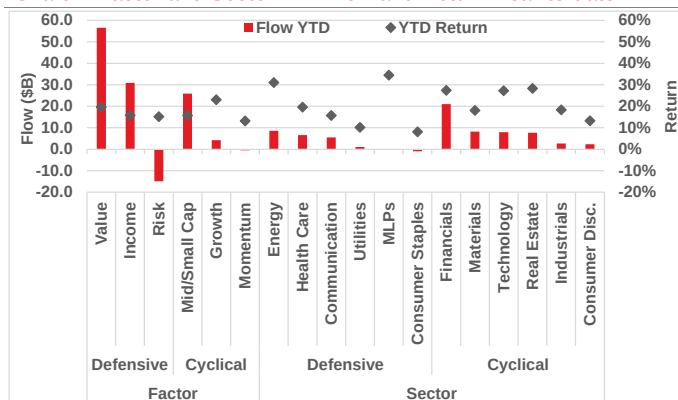
Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Chart 1: U.S. Listed ETF Flow and AUM



Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Chart 2: Factor and Sector ETF Flow and Return Year-to-date



Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Equity Sector and Thematic ETFs: Similar to July, most defensive sectors enjoyed inflows in August, while pro-cyclical sectors like for Energy had a \$1.6 billion outflow. Energy is also the only sector that finished with a loss in August. Sector flows are mostly consistent with their corresponding August returns, as exemplified by Financials and Communication Services; these sectors each jumped by more than 5% in August and also top the flow leaderboards. ESG ETFs received \$2.0 billion new money, or 2.3% of starting assets, but the source of recent growth is likely more institutional than retail; iShares ESG Aware MSCI USA ETF (ESGU) contributed almost 50% of ESG ETFs' total inflow and most of its creations took place in a single day. In fact, ESGU's asset has already grown by 66% this year and its AUM currently stands at \$22.3 billion, more than triple the size of the second largest ESG ETF in the U.S. (iShares ESG Aware MSCI EM ETF, **ESGE** at \$7.0 billion in AUM).

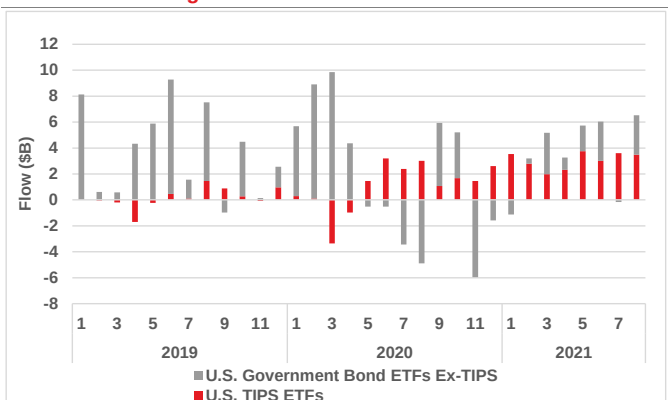
Equity Factor ETFs: All factors posted gains in August and almost all sub-categories welcomed new assets, with no single dominant factor; income, growth, small/mid cap, value and multi-factor ETFs all had at least \$2.0 billion inflows. Despite Momentum's chart-topping performance in August (S&P 500 Momentum Index gained 4.54%), momentum ETFs did not receive a parallel amount of attention, logging \$40 million in outflow. Low volatility factor ETFs also suffered outflows but slowed their bleeding from prior months, with redemptions of \$0.3 billion redemption in August (2% of year-to-date outflow).

Fixed Income ETFs: Perhaps as the Fed's tapering plan had been widely anticipated, the U.S. fixed income ETF market was hardly impacted by Chair Powell's remarks during the Jackson Hole Symposium. U.S. listed fixed income ETFs had a solid \$20 billion in creations in August; U.S. aggregate, U.S. government and U.S. corporate bond ETFs each had over \$4.0 billion inflow. After suffering an average monthly outflow of \$2.0 billion from January to July this year, iShares iBoxx \$ IG Corporate Bond ETF (LQD) finally had a month of meaningful inflows, receiving \$2.4 billion. Maturity-wise, investors were buying ETFs across the entire term spectrum; broad/mixed maturities, short-term and long-term bonds remained in favor, but mid-term bond ETFs also enjoyed a decent inflow of \$2.0 billion, or 20% of their year-to-date amount. Another standout in the fixed income flow landscape has been the sudden buying of inflation-protected TIPS ETFs (Chart 3) as inflation fears have started to surface in reaction to unprecedented pandemic-related stimulus spending and labour shortages. iShares TIPS Bond ETF (TIP) was the second-best-selling bond ETF in August and the sixth highest on the inflow leaderboard (Table 7).

Best Performing ETFs:

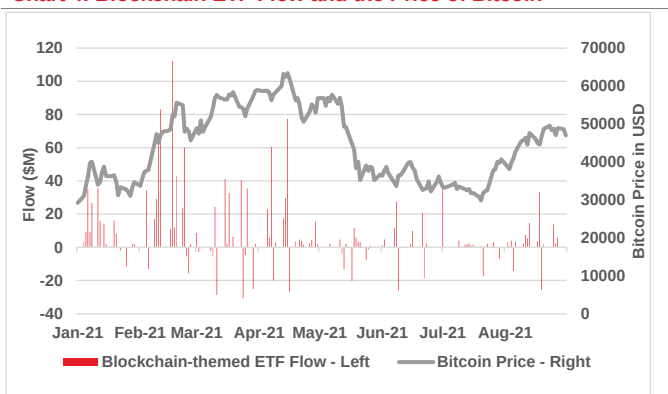
Blockchain-themed ETFs have performed well in August, possibly related to a technical rebound in bitcoin USD prices. However, unlike the buying frenzy from the first half of the year, interest in these blockchain-themed ETFs was relatively low in August (Chart 5).

Chart 3: Increasing Demand in U.S. TIPS since the Pandemic



Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Chart 4: Blockchain ETF Flow and the Price of Bitcoin



Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Chart 5: Best Performing ETFs* – August 2021

	Ticker	Name	Total Return (%)	AUM (\$M)	Flow (\$M)
1	RIGZ	Viridi Cleaner Energy Crypto-Mining & Semicon	22.5	10	5
2	CHIE	Global X MSCI China Energy ETF	18.3	4	0
3	BKCH	Global X Blockchain ETF	18.3	33	19
4	DAPP	VanEck Digital Transformation ETF	17.3	55	16
5	AGT	iShares MSCI Argentina and Global Exposure ETF	16.5	9	0
6	ARGT	Global X MSCI Argentina ETF	16.4	40	-2
7	BITQ	Bitwise Crypto Industry Innovators ETF	14.2	72	9
8	BOAT	Sonicshares Global Shipping ETF	14.1	2	2
9	GRN	iPath Series B Carbon ETN	13.9	76	13
10	BETZ	Roundhill Sports Betting & iGaming ETF	13.4	403	-3

*excluding leveraged/inverse ETFs. Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

August 2021 ETF Flows: Tables 2 - 8 (next page)

Table 2 - Equity ETF Flows by Geography - August 2021

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,026		\$44.1	1.1%
Broad/Large Cap	\$1,651	31%	\$23.9	1.5%
U.S. Other	\$2,375	45%	\$20.2	0.9%
International Developed	\$577		\$6.9	1.2%
Broad Int'l Dev	\$431	8%	\$5.1	1.2%
Broad Europe	\$57	1%	\$0.7	1.2%
Japan	\$25	0%	\$0.0	0.2%
Canada	\$10	0%	\$0.5	4.9%
Other Developed	\$55	1%	\$0.6	1.2%
Emerging Markets	\$319		\$1.3	0.4%
Broad Cap Weighted	\$212	4%	\$0.8	0.4%
China (A+H)	\$28	1%	\$1.4	5.2%
Other EM	\$78	1%	-\$0.9	-1.1%
Global/Regional	\$404	8%	\$1.5	0.4%
Total Displayed	\$5,326	100%	\$53.8	1.0%

Source: National Bank of Canada, Bloomberg

Table 3 - Equity ETF Flows by Sector and Themes* - August 2021

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Financials	\$82	9%	\$2.9	3.8%
Communication Services	\$47	5%	\$2.4	5.4%
Health Care	\$109	12%	\$1.6	1.5%
Technology	\$191	21%	\$1.6	0.8%
Utilities	\$22	2%	\$1.1	5.6%
Real Estate	\$91	10%	\$0.7	0.8%
Consumer Staples	\$23	2%	\$0.3	1.2%
Consumer Discretionary	\$45	5%	-\$0.3	-0.6%
Industrials	\$42	5%	-\$0.6	-1.4%
Materials	\$49	5%	-\$0.7	-1.3%
Energy	\$50	5%	-\$1.6	-2.9%
ESG	\$93	10%	\$2.0	2.3%
Thematic	\$79	9%	\$0.3	0.4%
Total Displayed	\$924	100%	\$9.8	1.1%

*Includes all geographic focus; Source: National Bank of Canada, Bloomberg

QQQ is classified as a broad market ETF and does not belong to technology sector

Table 7 - Top Single Long ETF Inflows - August 2021

Ticker	Name	Flow (\$B)	Flow/AUM
1 SPY	SPDR S&P 500 ETF Trust	\$7.8	2.0%
2 VOO	Vanguard S&P 500 ETF	\$4.9	2.0%
3 VTI	Vanguard Total Stock Market ETF	\$4.3	1.7%
4 QQQ	Invesco QQQ Trust Series 1	\$4.2	2.3%
5 LQD	iShares iBoxx \$ IG Corporate Bond ETF	\$2.4	6.0%
6 TIP	iShares TIPS Bond ETF	\$2.0	6.3%
7 XLF	Financial Select Sector SPDR Fund	\$2.0	5.0%
8 IVV	iShares Core S&P 500 ETF	\$1.7	0.6%
9 SCZ	iShares MSCI EAFE Small-Cap ETF	\$1.6	12.5%
10 KWEB	KraneShares CSI China Internet ETF	\$1.5	28.6%
11 BND	Vanguard Total Bond Market ETF	\$1.3	1.6%
12 VXUS	Vanguard Total International Stock ETF	\$1.3	2.6%
13 IWM	iShares Russell 2000 ETF	\$1.0	1.5%
14 XLU	Utilities Select Sector SPDR Fund	\$1.0	8.1%
15 QUAL	iShares MSCI USA Quality Factor ETF	\$0.9	3.9%
16 VEA	Vanguard FTSE Developed Markets ETF	\$0.9	0.9%
17 IWF	iShares Russell 1000 Growth ETF	\$0.9	1.2%
18 XLC	Comm. Services Select Sector SPDR Fund	\$0.8	5.9%
19 IEF	iShares 7-10 Year Treasury Bond ETF	\$0.8	5.7%
20 ESGU	iShares ESG Aware MSCI USA ETF	\$0.8	3.8%

Source: National Bank of Canada, Bloomberg

Table 4 - Fixed Income ETF Flows by Type - August 2021

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$302	25%	\$4.6	1.5%
U.S. Government	\$302	25%	\$5.9	2.0%
U.S. Municipals	\$73	6%	\$1.3	1.8%
U.S. I.G. Corporate	\$233	19%	\$4.6	2.0%
Developed Markets&Global	\$126	10%	\$1.2	1.0%
Emerging Markets	\$36	3%	\$0.4	1.1%
Sub-investment Grade	\$102	8%	\$1.0	1.0%
Convertibles and Preferreds	\$55	4%	\$1.0	1.9%
Total Displayed	\$1,228	100%	\$20.0	1.7%

Source: National Bank of Canada, Bloomberg

Table 5 - Fixed Income ETF Flows by Maturity - August 2021

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$673	55%	\$10.9	1.6%
Ultra Short Term	\$111	9%	\$1.6	1.5%
Short Term	\$241	20%	\$3.9	1.6%
Mid Term	\$132	11%	\$2.0	1.5%
Long Term	\$44	4%	\$1.2	2.8%
Target Maturity	\$25	2%	\$0.3	1.4%
Rate Hedged	\$3	0%	\$0.1	4.2%
Total Displayed	\$1,228	100%	\$20.0	1.7%

Source: National Bank of Canada, Bloomberg

Table 6 - Equity ETF Flows by Factor* - August 2021

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Income	\$291	16%	\$3.7	1.3%
Growth	\$379	21%	\$2.6	0.7%
Value	\$374	21%	\$2.5	0.7%
Small/Mid Cap	\$469	26%	\$2.4	0.5%
Quality	\$40	2%	\$1.1	3.0%
Momentum	\$28	2%	\$0.0	-0.1%
Low Vol	\$63	4%	-\$0.3	-0.5%
Multi-Factor and Other	\$135	8%	\$2.5	1.9%
Total Displayed	\$1,778	100%	\$14.5	0.8%

*Includes all geographic focus, excluding sector ETFs; Source: NBC, Bloomberg

Table 8 - Top Single Long ETF Outflows - August 2021

Ticker	Name	Flow (\$B)	Flow/AUM
1 GLD	SPDR Gold Shares	-\$1.8	-2.9%
2 IJR	iShares Core S&P Small-Cap ETF	-\$0.7	-1.1%
3 XLI	Industrial Select Sector SPDR Fund	-\$0.6	-3.0%
4 MBB	iShares MBS ETF	-\$0.6	-2.3%
5 ARKK	ARK Innovation ETF	-\$0.5	-2.4%
6 EWZ	iShares MSCI Brazil ETF	-\$0.5	-9.3%
7 XOP	SPDR S&P Oil & Gas Exploration & Production	-\$0.5	-13.8%
8 XLE	Energy Select Sector SPDR Fund	-\$0.4	-1.6%
9 USHY	iShares Broad USD High Yield Corp Bond ETF	-\$0.3	-3.9%
10 MDY	SPDR S&P MidCap 400 ETF Trust	-\$0.3	-1.5%
11 IJH	iShares Core S&P Mid-Cap ETF	-\$0.3	-0.5%
12 XLB	Materials Select Sector SPDR Fund	-\$0.3	-3.5%
13 TOK	iShares MSCI Kokusai ETF	-\$0.3	-57.6%
14 VXF	Vanguard Extended Market ETF	-\$0.3	-1.5%
15 ESGE	iShares Inc iShares ESG Aware MSCI EM ETF	-\$0.3	-3.6%
16 USMV	iShares MSCI USA Min Vol Factor ETF	-\$0.3	-0.9%
17 XSOE	Wisdomtree EM EX-State-Owned Enterprises	-\$0.2	-4.9%
18 IAU	iShares Gold Trust	-\$0.2	-0.7%
19 ILF	iShares Latin America 40 ETF	-\$0.2	-12.3%
20 ASHR	Xtrackers Harvest CSI 300 China A-Shares ETF	-\$0.2	-8.7%

Source: National Bank of Canada, Bloomberg

January - August 2021 ETF Flows: Tables 9 - 15

Table 9 - Equity ETF Flows by Geography - Jan-Aug 2021

Geography	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S.	\$4,026		\$304.2	9.8%
Broad/Large Cap	\$1,651	31%	\$109.0	8.6%
U.S. Other	\$2,375	45%	\$195.2	10.7%
International Developed	\$577		\$60.6	13.0%
Broad Int'l Dev	\$431	8%	\$39.7	11.3%
Broad Europe	\$57	1%	\$15.0	41.4%
Japan	\$25	0%	\$0.7	3.2%
Canada	\$10	0%	\$1.3	18.0%
Other Developed	\$55	1%	\$3.9	8.6%
Emerging Markets	\$319		\$32.4	11.6%
Broad Cap Weighted	\$212	4%	\$22.8	12.4%
China (A+H)	\$28	1%	\$8.9	37.5%
Other EM	\$78	1%	\$0.7	0.9%
Global/Regional	\$404	8%	\$68.0	21.5%
Total Displayed	\$5,326	100%	\$465.1	11.2%

Source: National Bank of Canada, Bloomberg

Table 10 - Equity ETF Flows by Sector and Themes* - Jan-Aug 2021

Sector	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Financials	\$82	9%	\$21.0	45.9%
Energy	\$50	5%	\$8.5	25.8%
Materials	\$49	5%	\$8.3	20.5%
Technology	\$191	21%	\$7.9	5.1%
Real Estate	\$91	10%	\$7.7	11.7%
Health Care	\$109	12%	\$6.6	7.2%
Communication Services	\$47	5%	\$5.5	14.7%
Industrials	\$42	5%	\$2.7	8.0%
Consumer Discretionary	\$45	5%	\$2.3	6.2%
Utilities	\$22	2%	\$1.0	5.5%
Consumer Staples	\$23	2%	-\$0.9	-4.2%
ESG	\$93	10%	\$25.1	40.2%
Thematic	\$79	9%	\$22.8	42.9%
Total Displayed	\$924	100%	\$118.5	17.0%

*Includes all geographic focus; Source: National Bank of Canada, Bloomberg

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Table 14 - Top Single Long ETF Inflows - Jan-Aug 2021

Ticker	Name	Flow (\$B)	Flow/AUM
1 VOO	Vanguard S&P 500 ETF	\$36.7	20.6%
2 VTI	Vanguard Total Stock Market ETF	\$27.8	13.8%
3 IVV	iShares Core S&P 500 ETF	\$15.3	6.4%
4 BND	Vanguard Total Bond Market ETF	\$14.5	21.3%
5 DFAC	Dimensional US Core Equity 2 ETF	\$13.5	NA
6 BSV	Vanguard Short-Term Bond ETF	\$11.9	40.1%
7 VTV	Vanguard Value ETF	\$11.5	18.6%
8 QQQ	Invesco QQQ Trust Series 1	\$10.5	6.9%
9 IEMG	iShares Core MSCI Emerging Markets ETF	\$9.7	14.2%
10 XLF	Financial Select Sector SPDR Fund	\$9.4	37.9%
11 IUSB	iShares Core Total USD Bond Market ETF	\$9.4	156.5%
12 VEA	Vanguard FTSE Developed Markets ETF	\$8.6	9.8%
13 VXUS	Vanguard Total International Stock ETF	\$8.6	22.3%
14 IEFA	iShares Core MSCI EAFE ETF	\$8.4	10.0%
15 BNDX	Vanguard Total International Bond ETF	\$8.4	22.4%
16 SCHD	Schwab US Dividend Equity ETF	\$7.7	47.4%
17 VVO	Vanguard FTSE Emerging Markets ETF	\$7.6	10.6%
18 EFV	iShares MSCI EAFE Value ETF	\$7.0	96.6%
19 RSP	Invesco S&P 500 Equal Weight ETF	\$6.8	37.6%
20 TIP	iShares TIPS Bond ETF	\$6.4	24.3%

Source: National Bank of Canada, Bloomberg

Table 11 - Fixed Income ETF Flows by Type - Jan-Aug 2021

Type	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
U.S. Aggregate	\$302	25%	\$45.0	17.2%
U.S. Government	\$302	25%	\$38.3	12.3%
U.S. Municipals	\$73	6%	\$13.5	22.7%
U.S. I.G. Corporate	\$233	19%	\$10.5	4.7%
Developed Markets&Global	\$126	10%	\$21.5	20.4%
Emerging Markets	\$36	3%	\$5.4	16.9%
Sub-investment Grade	\$102	8%	\$9.0	9.8%
Convertibles and Preferreds	\$55	4%	\$4.9	10.0%
Total Displayed	\$1,228	100%	\$142.9	13.1%

Source: National Bank of Canada, Bloomberg

Table 12 - Fixed Income ETF Flows by Maturity - Jan-Aug 2021

Maturity	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Broad/Mixed	\$673	55%	\$72.9	12.1%
Ultra Short Term	\$111	9%	\$9.0	8.8%
Short Term	\$241	20%	\$44.8	22.8%
Mid Term	\$132	11%	\$10.0	8.1%
Long Term	\$44	4%	\$1.6	3.5%
Target Maturity	\$25	2%	\$3.6	16.7%
Rate Hedged	\$3	0%	\$1.1	59.2%
Total Displayed	\$1,228	100%	\$143.0	13.1%

Source: National Bank of Canada, Bloomberg

Table 13 - Equity ETF Flows by Factor* - Jan-Aug 2021

Factor	AUM (\$B)	Mkt Shr	Flow (\$B)	Flow/AUM
Value	\$374	21%	\$56.5	21.6%
Income	\$291	16%	\$30.9	14.0%
Small/Mid Cap	\$469	26%	\$25.9	7.0%
Growth	\$379	21%	\$4.2	1.3%
Quality	\$40	2%	\$1.2	3.9%
Momentum	\$28	2%	-\$0.5	-2.0%
Low Vol	\$63	4%	-\$14.9	-21.1%
Multi-Factor and Other	\$135	8%	\$14.0	13.8%
Total Displayed	\$1,778	100%	\$117.5	8.4%

*Includes all geographic focus, excluding sector ETFs; Source: NBC, Bloomberg

Table 15 - Top Single Long ETF Outflows - Jan-Aug 2021

Ticker	Name	Flow (\$B)	Flow/AUM
1 LQD	iShares iBoxx \$ IG Corporate Bond ETF	-\$11.2	-20.3%
2 GLD	SPDR Gold Shares	-\$9.4	-13.3%
3 USMV	iShares MSCI USA Min Vol Factor ETF	-\$8.4	-25.2%
4 HYG	iShares iBoxx High Yield Corporate Bond ETF	-\$6.0	-23.2%
5 SHV	iShares Short Treasury Bond ETF	-\$3.5	-19.7%
6 JNK	SPDR Bloomberg Barclays High Yield Bond ETF	-\$3.2	-25.6%
7 EFAV	iShares MSCI EAFE Min Vol Factor ETF	-\$2.6	-24.5%
8 USO	United States Oil Fund LP	-\$2.3	-62.6%
9 IHI	iShares U.S. Medical Devices ETF	-\$2.1	-22.8%
10 IVW	iShares S&P 500 Growth ETF	-\$1.9	-5.9%
11 EWJ	iShares MSCI Japan ETF	-\$1.8	-13.5%
12 FDN	First Trust Dow Jones Internet Index Fund	-\$1.7	-15.0%
13 IAU	iShares Gold Trust	-\$1.6	-4.9%
14 IWF	iShares Russell 1000 Growth ETF	-\$1.5	-2.3%
15 EWZ	iShares MSCI Brazil ETF	-\$1.5	-22.4%
16 IGV	iShares Expanded Tech-Software Sector ETF	-\$1.4	-23.1%
17 GDX	VanEck Vectors Gold Miners ETF	-\$1.3	-7.9%
18 EWY	iShares MSCI South Korea ETF	-\$1.3	-17.5%
19 IYR	iShares U.S. Real Estate ETF	-\$1.1	-20.7%
20 ACWV	iShares MSCI Global Min Vol Factor ETF	-\$1.1	-18.0%

Source: National Bank of Canada, Bloomberg

Table 16: ETF Provider Table

Provider	AUM (\$B)	Mkt Shr	August 2021 Flow (\$B)	Flow/AUM	Jan-Aug 2021 Flow (\$B)	Flow/AUM
1 BlackRock iShares	\$2,374	35%	\$8.5	0.4%	\$121.6	6.0%
2 Vanguard	\$1,956	29%	\$33.5	1.8%	\$231.0	15.3%
3 State Street SSGA	\$1,029	15%	-\$1.6	-0.2%	\$49.8	5.9%
4 Invesco	\$380	6%	-\$1.2	-0.3%	\$36.0	12.2%
5 Charles Schwab	\$257	4%	\$2.8	1.2%	\$27.8	14.0%
6 First Trust	\$141	2%	\$1.2	0.9%	\$17.1	15.4%
7 JPMorgan	\$69	1%	\$1.7	2.6%	\$19.8	44.0%
8 VanEck	\$62	1%	\$0.5	0.7%	\$7.7	14.4%
9 ProShares	\$61	1%	-\$0.1	-0.1%	\$4.2	8.9%
10 WisdomTree	\$46	1%	\$0.4	1.0%	\$2.8	7.3%
11 ARK	\$45	1%	-\$1.6	-3.2%	\$13.4	38.6%
12 Mirae	\$38	1%	\$1.4	4.1%	\$14.4	68.9%
13 Dimensional Holdings	\$32	0%	\$0.4	1.2%	\$30.8	8045%
14 Fidelity	\$32	0%	\$0.4	1.3%	\$3.9	16.5%
15 PIMCO	\$27	0%	\$0.1	0.2%	\$1.0	3.7%
16 Direxion	\$25	0%	\$0.5	1.8%	\$0.1	0.7%
17 Goldman Sachs	\$25	0%	\$0.5	2.1%	\$0.5	2.2%
18 DWS Xtrackers	\$22	0%	-\$0.2	-0.7%	\$0.7	3.5%
19 Northern Trust	\$19	0%	\$0.2	1.3%	\$3.0	20.7%
20 KraneShares	\$13	0%	\$1.6	14.1%	\$8.4	135.4%
Top 20 Total	\$6,653	98%	\$49.0		\$594.0	
Total ETF	\$6,814	100%	\$51.9		\$620.9	

Source: NBF ETF Research, Bloomberg. Data as of August 31, 2021

Appendix 1 - Glossary

Exchange Traded Funds (ETFs) are open-ended mutual funds in continuous distribution. This report also includes other Exchange Traded Products such as notes, grantor trusts, limited partnerships and unit investment trusts.

AUM (Assets Under Management): AUM is expressed in local currency, which is the U.S. dollar for the purpose of this report.

Market Share / AUM (%): AUM as % of category total AUM on the last line of the table.

Flow: The net dollar amount of fund creations and redemptions for the period based on daily NAV and the change in Shares Outstanding. Flows are expressed in local currency, which is the U.S. dollar for the purpose of this report.

Maturity: We categorize fixed income ETFs into the following maturity brackets:

- **Broad/Mixed:** ETF that holds issues from across more than one maturity bucket (short, mid and/or long-term).
- **Floating Rate:** ETF that mainly invests in floating rate issues with periodic interest rate resets.
- **Long-Term:** ETF that mainly invests in long-term issues and has a weighted average maturity greater than 10 years.
- **Mid-Term:** ETF that mainly invests in intermediate-term fixed issues and has a weighted average maturity between three and 10 years.
- **Short-Term:** ETF that mainly invests in short-term issues with weighted average maturity less than three years.
- **Target Maturity:** ETF that has a target maturity, such as a fixed date or year.
- **Rate Hedged:** ETF that uses derivatives to mitigate interest rate risk and to maintain a zero or negative portfolio duration.

NAV (Net Asset Value per share): ETF price is used when NAV is not available.

Flow/AUM (Flow as % AUM): Flow as a percentage of assets under management from the beginning of the period.

Defensive Sectors: We classify Consumer non-cyclicals, Energy, Health Care, Utilities as defensive sectors.

Cyclical Sectors: We classify Consumer Cyclicals, Financials, Real Estate, Industrials, Information Technology, Materials, Communication Services as cyclical sectors.

All numbers are as of last month's final business day.

Appendix 2 - Equity ETF by Factor Categories

We group Factor Equity ETFs (exclude cap-weighted ETFs, sector ETFs and thematic ETFs) into the categories below. These groupings follow NBF's discretion and can differ from the ETF Provider's definition and classification from other sources.

Small/Mid Cap: A fund with small/mid cap focus.

Income: A fund with the primary goal of providing income. We classify a fund as belonging to the Income category when its strategy focuses on providing income or the fund self-identifies as using an income strategy, even though it may incorporate other factors in addition to income.

Value: A fund that invests primarily in the stocks that are considered undervalued using metrics such as price-to-earnings, price-to-book, EV/EBITA, etc.

Growth: A fund that invests primarily in fast-growing stocks using metrics such as earnings growth, sales growth, momentum, etc.

Momentum: A fund that invests primarily in high momentum stocks using metrics such as period returns.

Quality: A fund that invests primarily in high quality stocks using metrics like ROE, debt/equity and earnings growth.

Low Vol or Risk: A fund that aims to achieve reduced portfolio volatility, either by screening for low volatility stocks, low beta stocks and/or minimizing the portfolio volatility.

Other: Any non-cap weighted factor strategy that is not covered by otherwise defined categories. This includes equal-weight, multi-factor, AlphaDEX and other fundamental-based ETFs.

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Levered and Inverse Exchange-Traded Funds are very different from most ETFs. They pursue leveraged investment goals, and they are riskier than alternatives that do not use leverage because they magnify the performance of the benchmark on an investment. These ETFs seek daily leveraged investment results. The return of an inverse or levered ETF for periods longer than a single day, especially in periods of market volatility, may be completely uncorrelated to the return of the benchmark over such longer periods. Levered and inverse ETFs are intended to be used as short-term trading vehicles for investors managing their portfolios on a daily basis. They are not to be used by, and are not appropriate for, investors who intend to hold positions.

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